Connecting to the Internet

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This section describes how to set up the SBG 1000 Gateway on the LAN.

Before connecting the gateway to the Internet the following must be prepared:

1. Determine the type of connection best suited to the SBG1000 – Ethernet, HPNA, Wireless, and USB.
2. A computer properly connected to the gateway as explained below.
3. Active Data Over Cable Internet service provided by cable modem account.
4. The Road Runner (ISP) configuration information for the cable modem account.
5. For Ethernet connection, Ethernet cables and Network Interface Card (NIC's) with the accompanying software.
6. For HPNA, telephone jumper cables, HPNA interface cards, and the accompanying software.
7. For wireless connections, wireless adapters and the installation software for the adapters.
8. For USB, a USB cable and the Motorola SBG1000 Wireless Gateway & Cable Modem CD-ROM, which contains the software for a USB installation.

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Connecting to Time Warner Cable

To connect to Time Warner Cable, complete the following:

1. Using a coaxial cable provided by Time Warner Cable, connect the coaxial cable jack on the wall to the cable connector on the gateway.

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LAN Hardware Requirements

The following LAN Hardware requirements must be met:

- The SBG1000 Gateway connects to the LAN using either its twisted-pair Ethernet, USB, HPNA or 802.11b wireless port.

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Computer Requirements

The following Computer requirements must be met:

- To use the SGB1000 Gateway on Time Warner Cable network, each computer must have either an installed Ethernet NIC, USB Host port, or 802.11b wireless adapter. It is recommended that a Category 5 (CAT5) cable such as the one provided with the install kit be used.

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LAN Configuration Requirements

The following LAN configuration requirements must be met:

- For the initial connection to the Internet and configuration of the gateway, a computer must be connected to the gateway that is set to automatically get its TCP/IP configuration from the gateway via DHCP.

Note: Refer to Preparing the Network for assistance with DHCP configuration.

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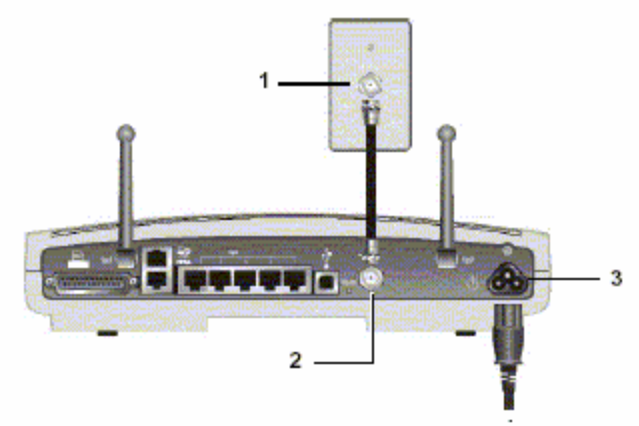
Connecting the SBG1000 to the Cable System

Note: Allow 5 to 30 minutes the first time the SBG1000 is turned on to find and lock on the appropriate communications channels.

To connect the SBG1000 to the cable system, complete the following steps:

1. Be sure the computer is on and the SBG1000 is unplugged.
2. Connect one end of the coaxial cable to the cable outlet or splitter.
3. Connect the other end of the coaxial cable to the cable connector on the SBG1000.

The following figure depicts these steps:



4. If using the optional Motorola External Diversity Antenna, install it now. Follow the instructions in Installing the Optional External Diversity Antenna.
5. Insert the CD-ROM into the CD-ROM drive.
6. Plug the power cord into the power connector on the SBG1000.
7. Plug the power cord into the electrical outlet.
8. Check that the lights on the Front Panel cycle through the following sequence:
    a. Power icon turns on when AC power is connected to the SBG1000 and indicates that the power supply is working properly.
    b. RX (receive) light flashes while scanning for the receive channel and changes to solid green when the receive channel is locked.
    c. TX (transmit) light flashes while scanning for the send channel and changes to solid green when the send channel is locked.
    d. LNK (link) light flashes during SBG1000 registration and configuration and changes to solid green when the cable modem wireless gateway is registered.
    e. Globe icon flashes when the SBG1000 is transmitting or receiving data.

Before using the modem, complete the following:

1. Connect to the computer using Ethernet, USB, or Wireless.
2. Connect the cable line from Time Warner Cable to the cable port of the gateway.
3. Connect the power adapter.

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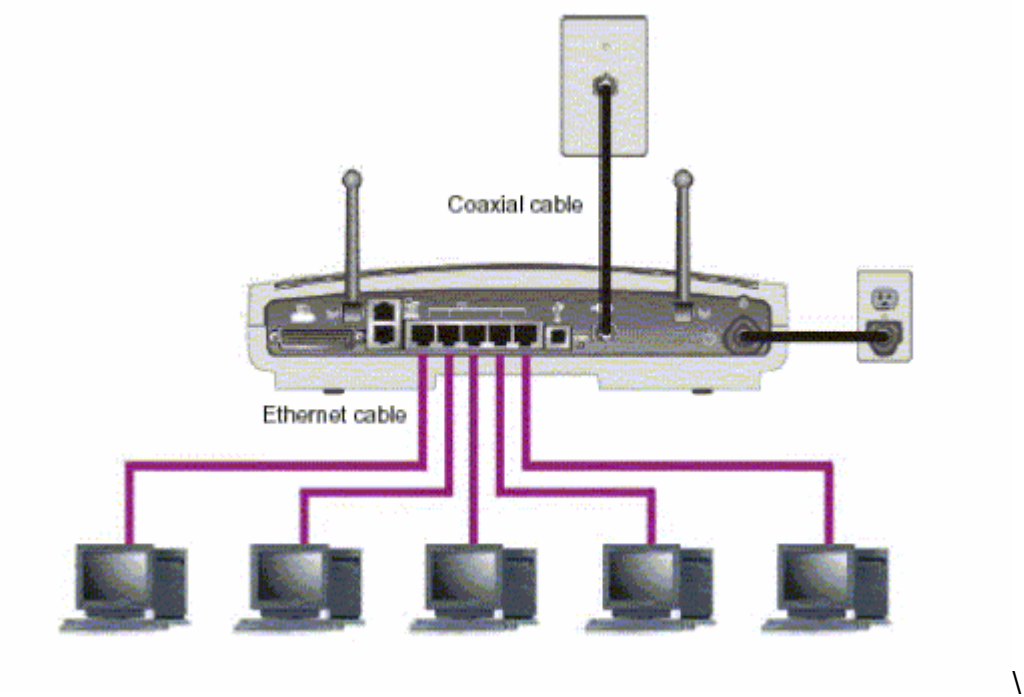
The following figure illustrates a typical Ethernet installation:



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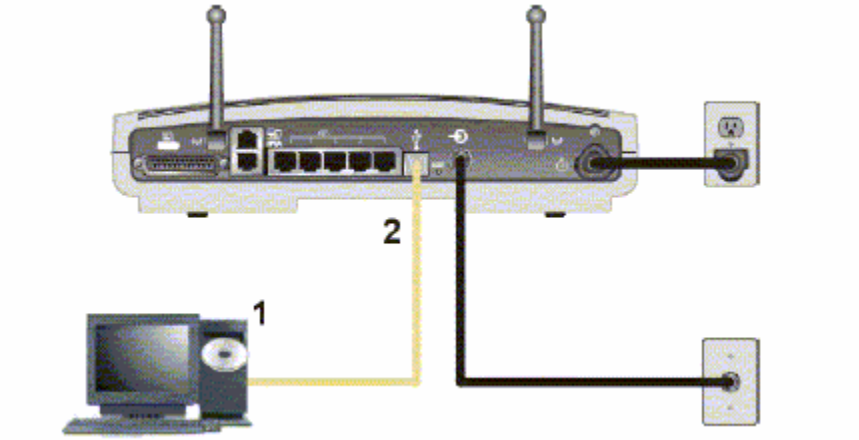
The following figure illustrates a typical USB installation:



Note: Before plugging in the USB cable, be sure the Motorola SBG1000 Wireless Cable Modem Gateway CD-ROM is inserted in the PC CD-ROM drive.

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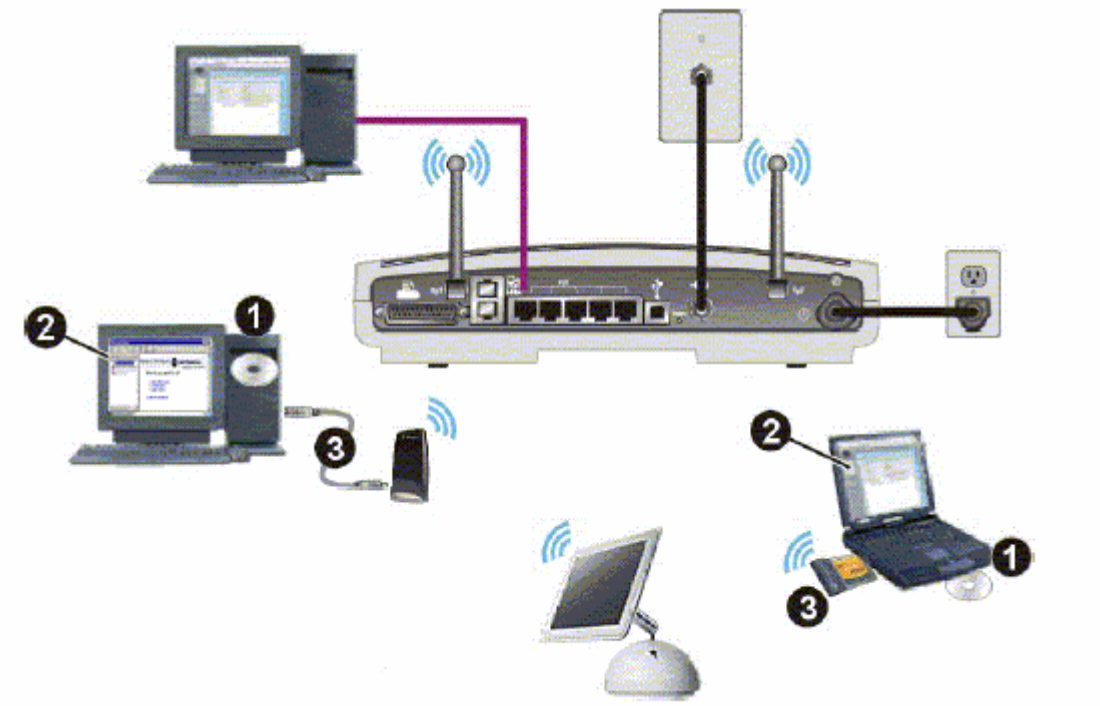
The following figure illustrates a typical Wireless installation:



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Cabling the Ethernet or HPNA LAN

After connecting to the cable system, connect the wired Ethernet and/or HPNA LAN.

Note: Proper drivers for the Ethernet NIC or HPNA adapter must be installed.

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Obtaining an IP Address in Windows 98, Windows 98 SE, or Windows Me

To obtain an IP address in Windows 98, Windows 98 SE, or Windows ME, complete the following steps on each Ethernet client PC running Windows 98, Windows 98 SE, or Windows ME:

1. On the Windows Desktop, click the Start button.
2. Select Run and the Run window is displayed.
3. Type winipcfg.exe and click the OK button.
4. The IP Configuration window is displayed. Click the Renew button to obtain an IP address for the PC from the DHCP server on the SBG1000.

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Obtaining an IP address in Windows 2000 or Windows XP

To obtain an IP address in Windows 2000 or Windows XP, complete the following steps on each Ethernet client PC running Windows 2000 or Windows XP:

1. On the Windows Desktop, click the Start button.
2. Select Run and the Run window is displayed.
3. Type cmd and click the OK button to display a command prompt window.
4. Type ipconfig /renew and press ENTER to obtain an IP address for the PC from the DHCP server on the SBG1000.
5. Type exit and press ENTER to return to Windows.

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Obtaining an IP address on Macintosh

To obtain an IP address on Macintosh, it is recommended that the instructions in the Macintosh user manual be followed.

Connecting a PC to the USB Port

To connect a PC to the USB port, complete the following steps:

1. Connect the USB cable to the USB port on the SBG1000.
2. Connect the other end to the USB port on the computer.
3. Install the USB driver following the appropriate procedure in Setting Up a USB Driver.

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Setting Up the Wireless LAN

Note: Before plugging in the USB cable, be sure the Motorola SBG1000 Wireless Cable Modem Gateway CD-ROM is inserted in the PC CD-ROM drive.

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Installing the Optional External Diversity Antenna

The maximum wireless operation distance depends on the type of materials through which the signal must pass and the location of the diversity antennas and clients (stations).

To install the optional Motorola External Diversity Antenna, complete the following steps:

1. Be sure the SBG1000 is unplugged. As with all electronic equipment, avoid potential shock by always unplugging the power cord from the wall outlet or other power source before disconnecting it from the SBG1000 rear panel.
2. Remove the antennas on the SBG1000 by unscrewing the connectors. A pair of needle nose pliers to loosen them may be needed. Store the antennas supplied on the SBG1000 in a safe place.
3. The following are the Distance Data Transfer Rates:
    - 30 meters (100 feet) 11 Mbps
    - 50 meters (165 feet) 5.5 Mbps
    - 75 meters (230 feet) 2 Mbps
    - 95 meters (300 feet) 1 Mbps
4. Connect the cables from the Motorola External Diversity Antenna to the connectors on the Motorola SBG1000 Wireless Cable Modem Gateway Front Panel.
5. Position or mount the External Diversity Antenna in a suitable location away from the computer and monitor. To obtain optimum results, try moving the External Diversity Antennas to slightly different locations.

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Starting the Setup Program

To start the setup program, complete the following steps:

1. On a computer on the LAN, open a web browser.
2. In the Address or Location field, type 192.168.100.1 and press Enter to display the Login window.
3. Click the Login button to display the Enter Network Password window.
4. In the User Name field, type the User Name (the default is “admin”).
5. In the Password field, type the Password (the default is “motorola” in lower case).
6. Click the OK button to display the SBG1000 Setup Program.

The following table details the components on the SBG1000 Window:

Component	Description
Cable	Configure and monitor the cable system connection.

Component	Description
Gateway	Configure and monitor the gateway preferences.
Wireless	Configure and monitor the wireless interface.
Firewall	Configure and monitor the firewall.
Printer	Configure the SBG1000 print server.
Admin	Changing the Default Password.
Help	Display information about the SBG1000.
Info	Display information about the SBG1000 Setup Program.
Reboot	Restart the SBG1000. It is the same as pressing the reset button on the Rear Panel for less than five seconds.

To change the default password complete the following steps:

1. On the SBG1000 Setup Program screen, click the Admin button to display the ADMIN — basic page.
2. Type the old password in the Old Password field.
   Note: The default password, in lowercase, is “motorola”.
3. Type the new password in the New Password field.
4. Type the new password again in the Verify Password field.
5. Click the Apply button to apply the changes.

Note: To prevent unauthorized configuration, change the default password immediately when the Motorola SBG1000 Wireless Cable Modem Gateway is first configured.

Note: The Division should establish a common login and password to use for all installers. After changing the password, log in again to continue the configuration. If the gateway settings have been previously backed up, do a new backup so that the saved settings file includes the new password.

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